

ABSTRACT OF THE DISCLOSURE

A first pinned ferromagnetic layer, an antiferromagnetic bonding layer and a second pinned ferromagnetic layer are sequentially formed over an antiferromagnetic layer. A layered ferrimagnetic structure is established. A compound or oxide layer is interposed between the antiferromagnetic bonding layer and the second pinned ferromagnetic layer. The compound layer serves to efficiently prevent transmission of an undulation or interfacial roughness. Undulation or interfacial roughness can be suppressed at the interface or boundary of a non-magnetic spacer layer formed on the second pinned ferromagnetic layer. The magnetic interaction can thus be suppressed between the second pinned ferromagnetic layer and a free ferromagnetic layer on the non-magnetic spacer layer, irrespective of a smaller thickness of the non-magnetic spacer layer. The magnetization of the free ferromagnetic layer can thus easily rotated in response to the polarity of an applied magnetic field, irrespective of a smaller thickness of the non-magnetic spacer layer. The magnetoresistive ratio can be improved.